

ABSTRACT OF THE INVENTION

An electrical resistor has a surface mounted four terminal current sensor of a very low resistance value and capable of handling short pulses of high power. It comprises a flat metal plate, 1 to 50 mils thick, of an alloy of high electrical resistivity, to which are welded, on two opposite sides, two flat metal plates of very high electrical conductivity which serve as terminations for electrical interconnection. A slot is cut, from the outside edge toward the center, into each of the two termination plates which divides them into a wide pad for connection of current carrying wires and a narrow one for voltage sensing. The depth of the slots is optimized to get the best stability of resistance readings with changing ambient temperature and under influence of the self-heating effect.